

WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month of October was considerably below the normal at land stations in Newfoundland and eastern Canada, as well as in a portion of the West Indies, while the negative departure at the Azores was unusually large. The pressure was not far from the normal at Hatteras, Bermuda, and Porto Rico, while it was considerably above on the north coast of Scotland. This reversal of the usual atmospheric conditions, with the Azores HIGH often replaced by a LOW and abnormally high pressure occurring in the region normally occupied by the Icelandic LOW, was responsible for a good deal of anomalous weather over the territory between these two centers of action.

Fog was unusually prevalent over the Grand Banks during the month, as it was observed on 14 days from a number of vessels in that region, which is considerably above the normal as shown on the Pilot Chart. Fog was also observed on from 9 to 10 days off the coast of Nova Scotia and New England, while it was comparatively rare in European waters.

The number of days with winds of gale force was very much larger than usual over the major portion of the ocean, and a number of storms of an extra tropical nature extended as far south as the 35th parallel, while tropical disturbances of varying intensities were unusually frequent, especially for so late in the season.

On the 3d and 4th there was an area of low pressure of moderate intensity central near St. Johns, Newfoundland, that between the 4th and 5th moved rapidly eastward, increasing in extent and violence, and on the latter date the center was near latitude 52° N., longitude 37° W., with winds of hurricane force in the southern and south-western quadrants. Storm logs follow:

American S. S. Nobles:

Gale began on the 3d, wind NNW. Lowest barometer 29.11 inches at 2 a. m. on the 5th, wind S., 6, in latitude 48° N., longitude 41° 40' W. End on the 6th. Highest force of wind 12; shifts S.-NNW.

British S. S. Galtymore:

Gale began on the 3d, wind W. Lowest barometer 28.59 inches at 4 p. m. on the 5th, wind SE., 3, in latitude 51° 45' N., longitude 39° 44' W. End on the 6th, wind W. Highest force of wind 11; shifts NW.-SW.-W.

On the 3d and 4th there was also a disturbance over the eastern section of the steamer lanes, the storm area on the former date extending as far south as the 40th parallel. Storm logs:

British S. S. Kenbane Head:

Gale began on the 3d, wind NNW., 7. Lowest barometer 28.82 inches at 2:30 p. m. on the 3d, wind NW., in latitude 55° 31' N., longitude 37° 15' W. End on the 3d, wind NW. Highest force of wind 8, NW.; shifts NNW.-NW.

British S. S. Ocean Prince:

Gale began on the 4th, wind SW. Lowest barometer 29.77 inches at 1 p. m. on the 4th, wind SW., 10, in latitude 39° 40' N., longitude 40° W. End on the 5th, wind NW. Highest force of wind 10, S.; shifts SSW.-S.

Dutch S. S. Westerdijk:

Gale began on the 4th, wind SSE. Lowest barometer 28.87 inches at 5 p. m. on the 4th, wind N., 12, in latitude 46° 11' N., longitude 44° 03' W. End on the 5th, wind W. Highest force of wind 12, N.; shifts SSE.-N.-W.

From the 9th to the 13th heavy weather was prevalent over the middle and eastern sections of the steamer lanes, as shown by following storm logs:

American S. S. Hoxie:

Gale began on the 9th, wind SW. Lowest barometer 29.78 inches at 3 p. m. on the 9th, wind SW., 8, in latitude 50° 38' N., longitude 34° 40' W. End on the 10th, wind NW. Highest force of wind 9; shifts SW.-NW.

Danish S. S. Frederick VIII:

Gale began on the 10th, wind SE. Lowest barometer 29.89 inches at 8 a. m. on the 10th, wind SW., 10, in latitude 54° 29' N., longitude 28° 20' W. End on the 11th, wind NNW. Highest force of wind 10; shifts not given.

American S. S. Sundance:

Gale began on the 12th, wind NNW. Lowest barometer 29.01 inches at midnight on the 12th, wind NNW., 10, in latitude 48° 30' N., longitude 22° 15' W. End at 6 a. m. on the 13th, wind NNW. Highest force of wind 10; steady from NNW.

Norwegian S. S. Balto:

Gale began on the 12th, wind NNE. Lowest barometer 29.34 inches at 6 a. m. on the 13th, wind NNE., 10, in latitude 51° 24' N., longitude 24° 10' W. End on the 13th, wind NNE. Highest force of wind 10; steady from NNE.

American S. S. Mongolia:

Gale began on the 12th, wind SE. Lowest barometer 29.24 inches at 10:30 a. m. on the 12th, wind SE., 8, in latitude 49° 30' N., longitude 19° 18' W. End on the 13th, wind SSE. Highest force of wind 10; shifts NE.-SE.

From the 9th to the morning of the 13th there was also an area of low pressure in the vicinity of Swan Island that on the evening of the latter date began to move northward, increasing in intensity, and on the 16th was central near Apalachicola, Fla. Storm log:

American S. S. City of Weatherford:

Gale began at 8 a. m. on the 14th, wind NNE. Lowest barometer 29.83 inches at 6 p. m. on the 14th, wind NNE., 8, in latitude 27° 25' N., longitude 86° 54' W. End at 6 p. m. on the 14th, wind NNE., 6. Highest force of wind 8, NNE.; steady from NNE.

The American S. S. *Chalmette* on her voyage from Habana to New Orleans, at 8 a. m. on the 15th, in latitude 26° N., longitude 85° W., experienced a westerly wind, force S, and a barometer reading of 29.70 inches.

On the 14th a disturbance of considerable intensity was central near latitude 50° N., longitude 40° W.; this moved rapidly eastward, and on the 16th was near latitude 45° N., longitude 18° W. It then curved sharply toward the south, and on the 17th was off the coast of Spain. Storm logs:

American S. S. West Celina:

Gale began on the 14th, wind S. Lowest barometer 29.30 inches at 5 a. m. on the 14th, wind W., 7, in latitude 50° 41' N., longitude 41° 23' W. End on the 15th, wind NW., 5. Highest force of wind 11; shifts NW.-W.-NW.

Belgian S. S. Mercier:

Gale began on the 14th, wind WNW. Lowest barometer 29.72 inches at 8 a. m. on the 14th, wind WNW., in latitude 47° 40' N., longitude 38° 46' W. End on the 15th, wind WNW. Highest force of wind 11, WNW.; steady from WNW.

British S. S. Henry Deutsch de la Meurthe:

Gale began on the 15th, wind W. Lowest barometer 29.31 inches at 11:30 p. m. on the 15th, wind NW., 9, in latitude 43° 50' N., longitude 18° 30' W. End on the 17th, wind NNW. Highest force of wind 10; shifts SSW.-W.-NW.-NNW.

Italian S. S. *Citta di Messina*:

Gale began on the 17th, wind SSW., 8. Lowest barometer 29.28 inches at 2 p. m. on the 17th, wind SSW., 8, in latitude 38° 15' N., longitude 12° 20' W. End on the 18th, wind SW. Highest force of wind 10, SW.; shifts WSW.-SSW.

On the 15th the second tropical disturbance of the month appeared, central east of Swan Island, as described elsewhere. Charts VIII to XII show the conditions from the 16th to 20th, inclusive. A number of vessels encountered winds of hurricane force during this period, as shown by the following storm logs:

British S. S. *San Bruno*:

Gale began on the 16th, wind WNW., 7. Lowest barometer 29.57 inches at 3:30 p. m. on the 16th, wind NW., 8, in latitude 18° 03' N., longitude 83° 22' W. End on the 17th, wind NNW., 7. Highest force of wind 11; shifts WNW.-NW.-NNW.

The Honduras S. S. *Ceiba* reports that on the morning of the 17th moderate westerly winds prevailed, barometer 29.55 inches. The wind backed toward the south, and at 7 a. m. on the 18th, in latitude 20° 10' N., longitude 87° 10' W., it was blowing from that quarter with a force of 10, while the barometer had dropped to 29.08 inches. For several hours it continued to blow from the south, with a gradually rising barometer. By 7 p. m. the wind had moderated to SSE., 5, and the barometer read 29.50 inches.

American S. S. *Shenandoah*:

Gale began on the 17th, wind NE. Lowest barometer 29.40 inches at 7:30 p. m. on the 17th, wind WNW., 12, in latitude 20° 05' N., longitude 86° 05' W. End on the 18th, wind SW. Highest force of wind 12; shifts NE.-N.-NW.-WNW.-W.-SW.

The Honduran S. S. *Hibueras* at 10 a. m. on the 18th, in latitude 22° 40' N., longitude 88° 28' W., reported wind NE., 7, barometer 29.74 inches. The wind changed but little in force, backing gradually with slowly falling barometer until noon of the 19th, the observations at that time being, wind NW., 8, barometer 29.63 inches. Sometime between 6 p. m. of the 19th and 6 a. m. of the 20th the wind veered to NE., reaching its maximum force of 12 at the latter hour, when also occurred the lowest barometer reading of 29.42; position, latitude 20° 10' N., longitude 92° 06' W.

On the 20th and 21st there was an area of low pressure near the Bahamas and northeasterly winds of gale force prevailed over the region between the 29th and 35th parallels. Storm logs:

American S. S. *San Bruno*:

Gale began on the 19th, wind NE., 7. Lowest barometer 29.94 inches at 9 a. m. on the 19th, wind NE., 8, in latitude 30° 06' N., longitude 79° 20' W. End on the 20th, wind NE., 7; shifts NE.-ENE.-NE. by E.

American S. S. *Texan*:

Gale began on the 21st, wind NE. Lowest barometer 29.96 inches at 8 a. m. on the 21st, wind NE., 7, in latitude 29° 40' N., longitude 74° 15' W. End on the 21st, wind NE., 5. Highest force of wind 8, NE.; steady from NE.

From the 18th to the 22d moderate to strong gales were the rule over the eastern section of the ocean, and on the 19th there was also a fairly well developed disturbance in the vicinity of Newfoundland. Storm logs:

British S. S. *Cadillac*:

Gale began on the 17th, wind E. Lowest barometer 29.68 inches at 5:45 a. m. on the 18th, wind E., 8, in latitude 48° 19' N., longitude 11° 12' W. End on the 20th, wind NE. Highest force of wind 8, E.; steady from E.

Dutch S. S. *Burgerdijk*:

Gale began on the 18th, wind E. Lowest barometer 29.64 inches at 8 p. m. on the 18th, wind E., 8, in latitude 49° 37' N., longitude 18° 53' W. End on the 22d, wind ENE. Highest force of wind 9; steady ENE.

Danish S. S. *Tongking*:

Gale began on the 19th, wind ENE. Lowest barometer 29.65 inches at 2 a. m. on the 21st, wind ENE., in latitude 46° 50' N., longitude 21° 30' W. End on the 22d, wind E. Highest force of wind 8; steady from ENE.

British S. S. *Stanmore*:

Gale began on the 19th, wind SW. Lowest barometer 29.37 inches at 11:30 a. m. on the 19th, wind SW., 8, in latitude 46° 28' N., longitude 53° 04' W. End on the 19th, wind SW. Highest force of wind 8, SW.; wind unsteady but no shifts.

On the 21st there was a disturbance near latitude 44° N., longitude 45° W., that moved rapidly eastward during the next 24 hours, as by the 22d the center had reached the 35th meridian. Storm log:

British S. S. *Stanmore*:

Gale began on the 21st, wind SE. Lowest barometer 29.27 inches at 6 a. m. on the 22d, wind SW., 8, in latitude 51° 30' N., longitude 39° 49' W. End on the 22d, wind SW. Highest force of wind 10, SE.; shifts SE.-SW.

On the 21st and 22d westerly to northwesterly winds of gale force were encountered off the Spanish coast. Storm log:

Italian S. S. *Argentina*:

Gale began on the 20th, wind S. Lowest barometer 29.15 inches at 6 p. m. on the 21st, wind WNW., in latitude 38° N., longitude 16° W. End on the 23d, wind NW. Highest force of wind 8; shifts not given.

On the 24th and 25th the coast of Nova Scotia was covered by an area of low pressure of limited extent, and on the 26th strong gales were reported over the eastern section of the steamer lanes. Storm logs:

American S. S. *Wildwood*:

Gale began on the 24th, wind S. Lowest barometer 29.88 inches at 4 p. m. on the 24th, in latitude 41° 15' N., longitude 56° W. End on the 25th, wind NE. Highest force of wind 10; shifts S.-NW.

Belgian S. S. *Sunoco*:

Gale began on the 26th, wind S. Lowest barometer 29.77 inches at 3 a. m. on the 26th, wind S., 10, in latitude 49° 16' N., longitude 12° 51' W. End on the 27th, wind WNW. Highest force of wind 10; shifts S.-W.

From the 29th until the end of the month a number of vessels encountered gales of varying intensities in different sections of the ocean north of the 40th parallel. Storm logs:

American S. S. *Wildwood*:

Gale began on the 29th, wind SE. Lowest barometer 30.03 inches at 4 p. m. on the 29th, in latitude 49° N., longitude 31° W. End on the 30th. Highest force of wind 8; shifts S.-ESE.

Dutch S. S. *Prins der Nederlanden*:

Gale began on the 29th, wind NE. Lowest barometer 29.35 inches at 8 a. m. on the 29th, wind NE., in latitude 49° 35' N., longitude 4° 42' W. End on the 30th, wind NE. Highest force of wind 10; steady from NE.

From the 26th to the 31st there was an area of low pressure in the Gulf of Mexico that was of moderate intensity and not accompanied by unusual weather or heavy winds.

NORTH PACIFIC OCEAN.

By WILLIS E. HURD.

The weather over the North Pacific Ocean during October, 1922, exhibited the usual seasonal increase in energy over that of September, though the few reports and other information received from the Far East up to this writing indicated a less number of typhoons. The middle latitude disturbances both east and west, however, showed an increase in energy, and at least one tropical cyclone made itself felt off the west coast of Mexico during the last days of the rainy season.